

What is claimed is:

CLAIMS

1. A method for adding an additional layer to an integrated circuit, the
5 method comprising:
 providing an integrated circuit having an interconnect layer;
 depositing, over substantially all of an exposed surface of the
integrated circuit, an additional layer of material whose conductivity can be
altered; and
10 selectively altering the conductivity of a first portion of the
additional layer by selective annealing, to produce a sub-circuit in the additional
layer, the sub-circuit being in operative electrical communication with the
integrated circuit.
- 15 2. The method according to claim 1 and wherein the selective
annealing comprises selective laser annealing.
3. The method according to claim 1 or claim 2 and wherein the sub-
circuit is not visually distinguishable from a second portion of the additional layer,
20 the second portion being disjoint from the first portion.
4. The method according to claim 3 and wherein the second portion
comprises substantially all parts of the additional layer not comprised in the first
portion.
25
5. The method according to any of claims 1 - 4 and wherein the
selectively altering comprises altering substantially without removing any part of
the additional layer.
- 30 6. An integrated circuit produced by the method of any of claims 1 - 5.

7. A method for adding an additional layer to a plurality of integrated circuits, the method comprising:

providing a plurality of integrated circuits, each having an interconnect layer;

5 performing the following for each one of the plurality of integrated circuits:

depositing, over substantially all of an exposed surface of the one integrated circuit, an additional layer of material whose conductivity can be altered; and

10 selectively altering the conductivity of a first portion of the additional layer by selective annealing, to produce a sub-circuit in the additional layer, the sub-circuit being in operative electrical communication with the integrated circuit,

wherein the first portion of each integrated circuit has a shape, and,
15 for at least a first integrated circuit and a second integrated circuit of the plurality of integrated circuits, the shape of the first portion of the first integrated circuit is different from the shape of the first portion of the second integrated circuit.

8. The method according to claim 7 and wherein the shape of the first
20 portion of each one of the plurality of integrated circuits on a production wafer is different from the shape of the first portion of any other of the plurality of integrated circuits on the production wafer.

9. The method according to either claim 7 or claim 8 and wherein the
25 selective annealing comprises selective laser annealing.

10. The method according to any of claims 7 - 9 and wherein the sub-circuit is not visually distinguishable from a second portion of the additional layer, the second portion being disjoint from the first portion.

30

11. The method according to claim 10 and wherein the second portion comprises substantially all parts of the additional layer not comprised in the first portion.

5 12. The method according to any of claims 7 - 11 and wherein the selectively altering comprises altering substantially without removing any part of the additional layer.

10 13. A plurality of integrated circuits, produced by the method of any of claims 7 - 12.

14. A method for adding an additional layer to an integrated circuit, the method comprising:

15 providing an integrated circuit having an interconnect layer;
depositing, over substantially all of an exposed surface of the integrated circuit, an additional layer of material whose conductivity can be altered;

selectively doping only a first portion of the additional layer of material; and

20 selectively altering the conductivity of the first portion of the additional layer by annealing, to produce a sub-circuit in the additional layer, the sub-circuit being in operative electrical communication with the integrated circuit.

15. The method according to claim 14 and wherein the sub-circuit is not visually distinguishable from a second portion of the additional layer, the second portion being disjoint from the first portion.

16. The method according to claim 15 and wherein the second portion comprises substantially all parts of the additional layer not comprised in the first portion.

17. An integrated circuit produced by the method of any of claims 14 -
16.

18. A method for adding an additional layer to a plurality of integrated
5 circuits, the method comprising:

providing a plurality of integrated circuits, each having an
interconnect layer;

depositing, over substantially all of an exposed surface of each of
the plurality of integrated circuits, an additional layer of material whose
10 conductivity can be altered;

for each one of the plurality of integrated circuits, selectively doping
only a first portion of the additional layer of material of the one integrated circuit;
and

selectively altering the conductivity of the first portion of the
15 additional layer of each of the plurality of integrated circuits by annealing, to
produce a sub-circuit in the additional layer, the sub-circuit being in operative
electrical communication with the integrated circuit,

wherein the first portion of each integrated circuit has a shape, and,
for at least a first integrated circuit and a second integrated circuit of the plurality
20 of integrated circuits, the shape of the first portion of the first integrated circuit is
different from the shape of the first portion of the second integrated circuit.

19. The method according to claim 18 and wherein the shape of the first
portion of each one of the plurality of integrated circuits on a production wafer is
25 different from the shape of the first portion of any other of the plurality of
integrated circuits on the production wafer.

20. The method according to claim 18 or claim 19 and wherein the sub-
circuit is not visually distinguishable from a second portion of the additional layer,
30 the second portion being disjoint from the first portion.

21. The method according to claim 20 and wherein the second portion comprises substantially all parts of the additional layer not comprised in the first portion.

5 22. A plurality of integrated circuits, produced by the method of any of claims 18 - 21.

23. An integrated circuit comprising:
a lower integrated circuit portion including an interconnect layer;

10 and

an additional layer of material disposed over substantially all of a surface of the lower integrated circuit portion, the additional layer comprising a first portion, the first portion comprising a sub-circuit in operative electrical communication with the lower integrated circuit portion, the sub-circuit being not
15 visually distinguishable from a second portion of the additional layer, the second portion being disjoint from the first portion.

24. The integrated circuit according to claim 23 wherein the second portion comprises substantially all parts of the additional layer not comprised in
20 the first portion.